BRUHAT BANGALORE MAHANAGARA PALIKE

MEASUREMENT SHEET

RA 1ST AND FINAL BILL

Name of work: Improvements to Roads and Drains at Prakruthi Layout and Surrounding area in Ward No. 11 (Kuvempunagara).

Estimated Cost : Rs. 25.00 Lakhs

Job Code: 011-22-000007

Head of Account : P-3726 Zonal Public Works - POW Works

Name of Agency: Sri Jyothi Reddy, No. 81, A Block, Kaverinagara, RT Nagar Post, Bangalore - 560032.

Work order No: EE/BTP/BBMP/E-PMT/15(50367)/WO/21/2022-23 D: 22-04-2022.

	Measurements Recarded on :									
Sl No.	**Description**	**No.**	**L**	**B1**	**B2**	**Av.B**	**D**	**Qty**	**Rate**	**Amount**
1	Earthwork excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications.								Cum	
	Qty as per Pre-measurement Recorded vide E-Bill Page No. 01 to 02 is =							**386.35**	197.00	**76111.00**
2	Removing and refixing stone slabs of drains and pointing in CM (1:3)								Sqm	
	Qty as per Pre-measurement Recorded vide E-Bill Page No. 03 is =							**465.75**	90.00	**41918.00**
3	Providing granite slabs of selected quality roughly dressed having a size of 7.5 cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete								Sqm	
	Covering Slab 3rd Cross Prakruthi Layout	1	15.00			0.90		13.50		
		1	15.00			0.90		13.50		
		1	13.00			0.90		11.70		
	1st Cross Road									
	R/S	1	15.00			1.35		20.25		
	L/S	1	15.00			1.35		20.25		
		1	12.00			1.35		16.20		
								95.40		
								95.01	601.00	**57101.00**

Assistant Engineer
Ward No. 11

Assistant Executive Engineer
Vidyaranyapura Sub Division

Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

G. JYOTHIREDDY

Sl No.	Description	No.	L	B1	B2	Av.B	D	Qty	Rate	Amount
	Measurements Recarded on :									
4	KSRRB M2100-10. Providing and laying **Plain cement concrete of mix 1:3:6 with with OPC cement @ 220kgs, with crushed 40mm** and down size graded granite metal coarse aggregates @0.84cum and fine aggregates @ 0.56cum, in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days complete as per specifications								Cum	
	Qty as per Pre-measurement Recorded vide E-Bill Page No. 04 is =							**15.00**	4391.00	**65865.00**
5	Providing laying palin / reinforced cement concrete for side drains using M 20 nominal mix concrete with OPC at 300 kgs with 20 mm and down size granite metal course aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed well compacted for walls and bottom including cenmtering shuttering form work etc. complete as per approved drawing and design MORTH Specification No. 1500,1700,2200 Wall & Bottom thickness 15cm								Cum	
	Raft Bed Concrete									
	Prakruthi Layout Main Road E/S									
	From Culvert to Dead End	1	15.00			0.90	0.15	2.03		
		1	15.00			0.90	0.15	2.03		
		1	15.00			0.90	0.15	2.03		
		1	7.00			0.90	0.15	0.95		
	3rd Cross Road									
		1	15.00			0.80	0.15	1.80		
		1	15.00			0.80	0.15	1.80		
		1	15.00			0.80	0.15	1.80		
		1	15.00			0.80	0.15	1.80		
		1	4.40			0.80	0.15	0.53		
	Side Wall									
	Prakruthi Layout Main Road E/S									
	From Culvert to Dead End	2	15.00			0.15	0.50	2.25		
		2	15.00			0.15	0.50	2.25		
		2	15.00			0.15	0.50	2.25		
		2	7.00			0.15	0.50	1.05		
	3rd Cross Road									
		2	15.00			0.15	0.50	2.25		
		2	15.00			0.15	0.50	2.25		
		2	15.00			0.15	0.50	2.25		
		2	15.00			0.15	0.50	2.25		
		2	4.40			0.15	0.50	0.66		
								32.21		
								31.50	5726.00	**180369.00**

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G JYOTHIREDDY

Sl No.	Description	No.	L	B1	B2	Av.B	D	Qty	Rate	Amount
	Measurements Recarded on :									
6	Providing **T.M.T steel reinforcement for R.C.C work** including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. **TMT bars Fe 500**								Tonne	
	Qty as per Pre-measurement Recorded vide E-Bill Page No. 05 is =							**1.89**	73382.00	**138692.00**
7	Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, for coping. Including cost of all materials, labour, HOM of machinery, curing complete as per specifications.								Cum	
	Vent Concret									
	Prakruthi Layout Main Road E/S	1	10.50			0.60	0.10	0.63		
		1	6.20			0.60	0.10	0.37		
		1	9.60			0.60	0.10	0.58		
		1	5.50			0.60	0.10	0.33		
		1	3.80			0.60	0.10	0.23		
	W/S	1	6.60			0.60	0.10	0.40		
		1	2.90			0.60	0.10	0.17		
		1	6.00			0.60	0.10	0.36		
								3.07		
								3.00	4535.00	**13605.00**

27/6

Assistant Engineer
Ward No. 11

G. JYOTHI REDDY

29/6/16

Assistant Executive Engineer
Vidyaranyapura Sub Division

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Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

Sl No.	Description	No.	L	B1	B2	Av.B	D	Qty	Rate	Amount
	Measurements Recarded on :									
8	Providing **precast slab of 100 mm thick** including cost of all materials, labour, curing, transportation, loading unloading, etc., complete as per the direction of engineer in charge- Data rate.								Sqm	
	Prakruthi Layout									
	3rd Cross Road E/S	9	0.60			0.75		4.05		
		26	0.60			0.75		11.70		
	Prakruthi Layout from Culvert to Dead End	87	0.60			0.90		46.98		
	Prakruthi Layout Main Road Missing Damaged Slabs E/S	10	0.60			0.90		5.40		
		8	0.60			0.90		4.32		
		12	0.60			0.90		6.48		
		8	0.60			0.90		4.32		
	W/S	5	0.60			0.90		2.70		
		7	0.60			0.90		3.78		
		3	0.60			0.90		1.62		
								91.35		
								90.00	1892.00	**170280.00**

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G.JKOTHIREDDY

Sl No.	Description	No.	L	B1	B2	Av.B	D	Qty	Rate	Amount
	Measurements Recarded on :									
9	KSRRB 300-49. Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by manual means without disturbing the base and stacking of the debris materials including cost of all labour charges complete as per specifications.								Sqm	
	Qty as per Pre-measurement Recorded vide E-Bill Page No. 06 is =							**603.75**	77.00	**46489.00**
10	Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications.								Cum	
	Qty as per Pre-measurement Recorded vide E-Bill Page No. 07 is =							**138.86**	1621.00	**225092.00**
11	Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications.								Sqm	
	Qty as per Pre-measurement Recorded vide E-Bill Page No. 08 is =							**603.75**	27.00	**16301.00**
12	Providing and laying **bituminous macadam** on prepared surface with crushed coarse aggregates as per design mix formula for base / binding course including loading of aggregates with F.E. loader, hot mixing of stone aggregates and bitumen in hot mix plant, transporting the mixd material in tipper to paver and laying mixed materials with paver finisher to the required level and grade, rolling by power roller to achieve the desired density, but excluding cost of primer / tack coat including lead, lift and cost of all materials, labour, HOM of machineries complete as per specifications. MORTH /Chapter 5 - using **40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 3.3 % VG-30 Bitumen**								Cum	
	Qty as per Pre-measurement Recorded vide E-Bill Page No. 09 is =							**30.19**	5481.00	**165471.00**
13	Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete as per specifications.								Sqm	
	Qty as per Pre-measurement Recorded vide E-Bill Page No. 10 is =							**1725.00**	4.00	**6900.00**
14	Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.								Sqm	
			Qty Vide Item No. 13					1725.00		
								1725.00	10.00	**17250.00**
15	Providing and laying **bituminous concrete 40 mm thick** with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 500.9 complete in all respects complete as per specifications. MORTH Specification No. 509 - **using 40/60 TPH capacity H.M.P. with Mechanical Paver Gr-II (30 mm to 45 mm) with 6 % VG-30 Bitumen**								Cum	
	Prakruthi Layout Main Road									
		1	15.00	6.60	6.80	6.70	0.040	4.02		
		1	15.00	6.80	6.70	6.75	0.040	4.05		
		1	15.00	6.70	6.70	6.70	0.040	4.02		
		1	15.00	6.70	6.90	6.80	0.040	4.08		
		1	15.00	6.90	6.50	6.70	0.040	4.02		
		1	15.00	6.50	5.00	5.75	0.040	3.45		
		1	15.00	5.00	5.90	5.45	0.040	3.27		
		1	15.00	5.90	5.70	5.80	0.040	3.48		

33.84

Executive Engineer (BTP), BBMP

Sl No.	Description	No.	L	B1	B2	Av.B	D	Qty	Rate	Amount
		1	15.00	5.70	6.70	6.20	0.040	3.72		
		1	15.00	6.70	6.50	6.60	0.040	3.96		
		1	15.00	6.50	6.60	6.55	0.040	3.93		
		1	15.00	6.60	6.10	6.35	0.040	3.81		
		1	15.00	6.30	5.80	6.05	0.040	3.63		
	From Culvert to Dead End	1								
		1	15.00	4.50	4.80	4.65	0.040	2.79		
		1	15.00	4.80	5.20	5.00	0.040	3.00		
		1	15.00	5.20	4.60	4.90	0.040	2.94		
		1	7.00	4.60	4.60	4.60	0.040	1.29		
	3rd Cross Road									
		1	15.00	5.60	5.50	5.55	0.040	3.33		
		1	12.80	5.50	4.70	5.10	0.040	2.61		
		1	7.00	3.50	3.80	3.65	0.040	1.02		
		1	15.00	6.50	6.20	6.35	0.040	3.81		
		1	14.00	6.20	4.80	5.50	0.040	3.08		
								73.31		
								69.00	8100.00	**558900.00**

12/12/22
Executive Engineer,
(BTP), BBMP.

Assistant Engineer
Ward No. 11

11/12/22
Assistant Executive Engineer
Vidyaranyapura Sub Division

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S. JYOTHIREDDY

Sl No.	Description	No.	L	B1	B2	Av.B	D	Qty	Rate	Amount
	Measurements Recarded on :									
16	Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface:- Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications.								Sqm	
	Prakruthi Layout Main Road									
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
	From Culvert to Dead End									
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	7.00			0.10		1.40		
	3rd Cross Road									
		2	15.00			0.10		3.00		
		2	12.80			0.10		2.56		
		2	7.00			0.10		1.40		
		2	15.00			0.10		3.00		
		2	14.00			0.10		2.80		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	5.00			0.10		1.00		
								69.16		
								69.00	368.00	**25392.00**
	Sub Total									**1805736.00**
	GST @ 12%									**216688.00**
									Total	**2022424.00**

Assistant Engineer
Ward No. 11

G. JYOTHIREDDY

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